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VIROTEC

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23 September 2002

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File No. -82-5090

U.S Securities Exchange Commission
Attn: Filing Desk
450 Fifth Street
Washington DC 20549
USA



Dear Sir or Madam:

Re: Submission by Virotec International Ltd under Rule 12g3-2(b)

Please see attached ASX announcements made on the 23 September, 2002.

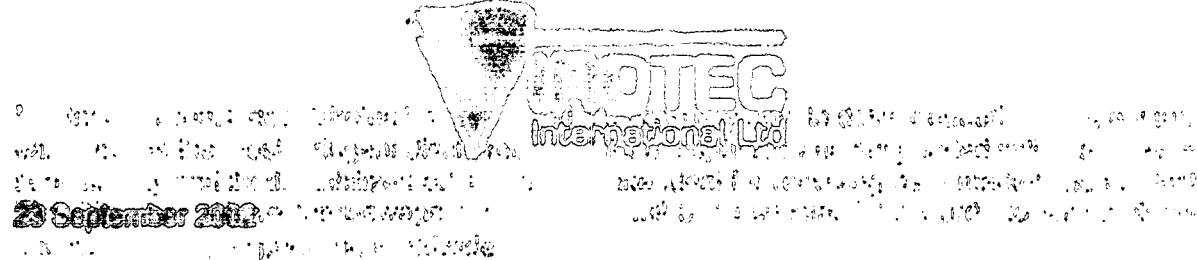
Yours faithfully

Angus Craig
Angus Craig
Company Secretary

Virotec International Ltd
Virotec Group

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VIROTEC EXPANDS INTO SEWAGE TREATMENT

Virotec International Ltd (ASX/AIM: VTI) is pleased to announce an entirely new process **ViroSewage™ technology**, which the company believes, will be of substantial value to the global wastewater treatment industry.

ViroSewage™ technology is a further development of the company's platform **Bauxsol™ Technology**. It is easily integrated into existing sewage treatment facilities and involves the implementation of a relatively simple engineering retro-fit and the application of ViroSewage™ reagents (patent applications lodged).

ViroSewage™ technology was developed and tested in Australia, with the assistance of two Queensland municipal councils, one a conventional Trickling Filter Facility, and the other, a Biological Nutrient Removal Facility. At both facilities, ViroSewage™ technology delivered outstanding results.

Executive Chairman, Brian Steeran states: Increasing urbanisation and industrialisation have resulted in a dramatic increase in the volume of wastewater produced around the world. It has also created significant challenges. Sludge disposal is a worldwide problem. Odour pollution is a worldwide problem. The capacities of sewage treatment plants are consistently being stretched.

Eighteen months ago, Virotec set out to see if the company could reduce odour waste and cleaner biosolids (treated sludge). We exceeded all our expectations. ViroSewage™ technology complements and optimises all the material flows and processes associated with sewage treatment, including final disposal.

Today we bring to the market a process that delivers:

1. Substantial odour reduction minimising local impacts from sewage treatment facilities.
2. Reduced residence time in the final clarifier potentially allowing existing plants to significantly increase capacity without significant increases in Capital Expenditure.
3. Significantly odourless removed of up to 98.0% of pathogens.
4. Superior biosolids that are free from objectionable odour, phosphate enriched and environmentally safe due to unmatched heavy metal immobilisation.
5. Treated biosolids that "boot" during composting at up to 16 degrees centigrade higher than normal untreated biosolids, while reducing the possibility of spontaneous combustion, providing significant environmental and economic incentives to compost biosolids that include:
 - 100% elimination of pathogens
 - Up to 60% reduction in time required for composting.
 - Up to 40% reduction in the quantity of green manure required for composting.

Mr Sheoran concludes "ViroBac has produced a technology able to deliver odourless effluent that easily meets the most stringent discharge limits for phosphorus and suspended solids as well as substantially enriched, stabilized colour free biomass ideal for recycling as a marketable product. The Directors believe ViroSewage™ technology will bring substantial rewards to shareholders and we are actively pursuing worldwide markets."

For further information regarding the ViroSewage™ technology please refer to the attached additional explanatory information or refer to www.virobac.com.

Yours etc

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1. **Technology** - ViroBac's ViroSewage™ technology is a unique and proprietary process for the removal of organic waste from wastewater. It uses a combination of biological and physical processes to remove organic matter, suspended solids, and dissolved nutrients from wastewater. The process involves the use of a specialized microorganism called ViroBac, which is able to break down complex organic compounds into simpler, more easily digestible forms. This results in a highly treated effluent that is safe for discharge into the environment.

2. **Efficiency** - ViroBac's ViroSewage™ technology is highly efficient, removing up to 95% of organic waste from wastewater. It is also highly reliable, with a success rate of over 99% in treating wastewater. The process is also energy efficient, using less energy than traditional wastewater treatment methods.

3. **Odour Elimination** - ViroSewage™ Process

ViroBac's ViroSewage™ process is designed to eliminate odours from wastewater. The process involves the use of a specialized microorganism called ViroBac, which is able to break down complex organic compounds into simpler, more easily digestible forms. This results in a highly treated effluent that is safe for discharge into the environment.

4. **Cost-effectiveness** - ViroSewage™ Technology is cost-effective, offering significant savings over traditional wastewater treatment methods.

ViroBac's ViroSewage™ process is cost-effective because it requires less energy than traditional wastewater treatment methods. It also requires less maintenance and has a lower capital cost. The process is also highly reliable, with a success rate of over 99% in treating wastewater. The process is also energy efficient, using less energy than traditional wastewater treatment methods.

ViroSewage™ Technology



The following information provides greater detail on the various aspects of ViroSewage™ technology and provides examples of some of the associated markets.

1) Odour Elimination - Existing Sewage Plants

Older sewage treatment works are now much closer to urban centres than when they were first built. Expanding cities and towns mean that houses are located close to the original treatment works. Complaints frequently refer to the unpleasant odour emanating from the open basins where the wastewater is treated and to the odour released from biosolids (treated sludge) stored at composting sites or sent to landfill. In some countries, governments have been forced to replace all the conventional open tanks in sewage treatment works with covered units to control the emission of foul air.

ViroSewage™ technology can be applied upstream of known odour sources within a treatment facility, resulting in a reduction in the biological production of organic and inorganic volatile sulphur compounds that cause odour problems, ultimately controlling the downstream odour from these points to the atmosphere.

ViroSewage™ technology will breakthrough in an industry that has struggled with various unsuccessful attempts to control odour problems relating to the addition of bacteria to sewage at water, oxygen, lime, hydrogen peroxide, chlorine dioxide and other types of air pollution controls such as activated carbon adsorption, biofilter and odour neutralising agents.

2) Odour Elimination - New Sewage Plants According to the World Bank, approximately 1.5 billion people in developing countries lack access to basic sanitation facilities. This figure is set to rise to 2.5 billion by 2025. In China alone, 600 million people will lack access to basic sanitation by 2010. Since 1990, the Chinese government has invested 200 billion yuan (24 billion U.S. dollars) directly in urban construction. The United Nations Millennium Development Organization has promised to allocate 30 billion U.S. dollars to help cover the gap in major Chinese cities in the next decade. A recent study by the World Bank found that 90% of new urban areas in developing countries will be served by ViroSewage™ technology due to its no odour pollution controls.

As several major companies are currently competing to construct treatment facilities in China, the proposed development ViroSewage™ technology will be given priority consideration by city proposals. Development City Ltd., Gold Coast, is a prominent developer in coastal China. Through their website, planning applications show plans for the grounds that the odour influence from the proposed development will be eliminated to the entirety of the site and subsequently, sewage treatment facilities are required to be located a significant distance from urban centres.

3) Increased Capacity

In the US, a nationwide survey revealed that between 1989 and 1990 the EPA provided \$81.1 billion in Federal Construction Grants Program funds to help fund new or upgrade existing publicly owned treatment facilities to cope with increasing demand. The States, local authorities and private sector made an even greater investment of well over \$800 billion. The survey also revealed the overall number of people served by publicly owned treatment facilities increased from 140.1 million in 1989 to 189.7 million in 1990 (a 33% increase) and the number of people served by publicly owned treatment facilities with secondary or greater levels of wastewater treatment almost doubled from 85.9 million in 1989 to 184.8 million in 1990.

Throughout the world, local governments are being asked to play a larger role in water resources financing to cope with rapidly increasing hydraulic and organic loads on sewage treatment facilities. For instance, in Australia, approximately 70% of the population live in large metropolitan centres with the consequence that large volumes of sludge are produced in a few centralised locations.

ViroSewage™ technology stimulates faster particle-fluid separation resulting in up to a 50% reduction in residence time in the final clarifier. This has significant repercussions for treatment plants operating at 100% capacity and facing costly upgrades. Potentially, the **ViroSewage™** process allows existing plants to significantly increase current capacity without substantial increases in capital expenditure.

Furthermore, **ViroSewage™** technology almost eliminates the need for costly flocculants.

4) Phosphate management

The total volume of treated water in North America is about 20 gallons per person per day, or 103 billion gallons per year. It is accepted worldwide that phosphate needs to be removed from sewage effluent before discharge, to prevent enhanced eutrophication (especially blue-green algae) particularly in shallow fresh water bodies. However, quite often, the liquid effluent discharge pipes from many municipal sewage treatment plants are "load sources" of untreated quantities of nutrients (nitrate and phosphate). EPA regulatory authorities worldwide continually seek reductions in the discharge of phosphorous substances from treated sewage effluent. A further piece of the **ViroSewage™** treatment regimen is the ability to remove inorganic phosphates contained in sewage effluent to the minimum detectable capability limit for phosphate precipitation. In this way, to 95% of the phosphate material is transferred to the VST, which is biocelled in a remarkably stable form, where it remains stable even in anoxic conditions. Unlike normal biomass, phosphate enriched VST biomass can potentially be used to improve cells whose pH is even less than 3.6. This is a remarkable achievement, as most bacteria cannot survive at such low pH levels. Ecologically, when tested at a conventional sewage treatment plant, improved the treated post-treatment phosphate removal from the effluent from 20 mg/l to 10 mg/l to 5 mg/l. This was achieved by adding **ViroSewage™** to the plant.

In a Biological Nutrient Removal sewage treatment plant, phosphate removal is highly dependent on both the treating microbial activity and the current plant operating conditions. Disruption to the BNR process may result from large variation in hydraulic flow, material overload, chemical or toxic shock, all of which generally result in excessive phosphate discharge.

ViroSewage™ technology, at a BNR plant, not only ensures the removal of over 90% of phosphorous from the effluent stream, it allows the BNR process to concentrate exclusively on the removal of nitrogen, considerably improving the efficiency of the BNR process and effectively reducing manpower hours needed for critical odour-generating BNR management.

5) Heavy Metal Immobilization

The EU estimates 67% of European biosolids in the short term, and 83% in the long term, fail to comply with limit values on heavy metals or organics compounds in sludge or in soil. Without the ability to comply with the stricter restrictions that are currently being imposed, it has been estimated that local authorities may have to bear a cost of up to 60% for the cost of switching from land-spreading to incineration of biosolids.

In the USA, the EPA has recently proposed strict guidelines for the disposal of biosolids in landfills, depending on the proximity of the landfill to pristine groundwater which is an irreplaceable source of drinking water. Leachate problems can arise from zinc, copper, lead and even cadmium found in biosolids produced in large cities.

ViroSewage™ technology can be used to immobilize heavy metals in biosolids so that stringent standards for leachability of heavy metals are met.

6) Recycled Biosolids

Local governments make the decision whether to incinerate biosolids, bury them in a landfill, dump them in oceans or recycle them as a fertilizer. In Sydney, Australia, for example, large volumes of sludge will continue to be produced by the coastal suburbs while the rural suburban landfills also could be as much as 100m away. In fact, just over half the world's population - around 3.2 billion people - occupy a coastal strip 200 kilometers wide (120 miles), representing only 10 per cent of the earth's land surface. When biosolids are successfully recycled, they can be applied as fertilizer to significantly improve and maintain productive soils and stimulate plant growth.

In the USA, only biosolids that meet the most stringent standards adopted out in the U.S. Environmental Protection Agency Federal and state rules can be approved for use as a fertilizer. Since 1992, when a ban on ocean dumping was instituted, applying biosolids to land has reduced the amount of sewage sludge that would otherwise need to be buried in landfills or incinerated. About 40 percent of sewage sludge produced is converted for land application. In 1998 the quantity of sludge generated in the US was estimated to be approximately 7.5 million dry tons per year.

In Europe, the total amount of sludge produced in the fifteen EU Member States is predicted to increase from 6.8 million tonnes of dry matter in 1992 to at least 8.4 million tonnes in 2003. Most imports originate from the European Union, certain states form of India originating as the most susceptible way. The EU expects the proportion of sludge used for fertilizer and composting to have increased by 70% by 2003, to 69 % of the total produced.

In response to environmental concerns, more and more local governments are seeking alternatives for their biosolids that will do the most for organic recycling and beneficial reuse. Many local governments are "re-thinking" composting to produce a value-added product that is saleable in multiple markets. Composting is primarily the acceleration of natural biodegradation.

The elevated temperatures of the controlled composting, which is produced by the microbial action, significantly reduces pathogens and breaks down the composting mass until a stabilized product is produced.

Traditionally, the natural biological action creates a temperature rise ranging from 60°C to 80°C and the reaction temperature in the pile must be at least 60°C for three weeks to achieve efficient pasteurization. ViroSewage™ technology results in the temperature rising as high as 85°C while reducing the possibility of spontaneous combustion and eliminating 100% of pathogens, generally within 24 hours of reaching this temperature.

ViroSewage™ technology also results in a 65% reduction in time required for the composting stabilization process enabling faster turnover and significantly reducing the size of the composting facility.

Biosolids composting also requires the addition of a bulking agent to provide air space and to make the mixture permeable. Typical bulking agents include green mulch, wood chips, shredded bark, sawdust, shredded paper other materials. ViroSewage™ technology results in a 40% reduction in the required volume of the bulking agent and, again this contributes to a large reduction in the size of the composting facility.

ViroSewage™ technology not only contributes to faster composting, it also vastly improves the quality of the end products for market – which range from a superior composted product, a first class soil conditioner and even a retail potting mix.

Traditionally, all facilities handling biosolids produce odours and frequently composting facilities are forced to operate at reduced capacity due to objectionable odour issues. In the US several of the large composting facilities have designed and engineered expensive air scrubbers to reduce emissions. ViroSewage™ technology eliminates offensive odour pollution.

Composting facilities also require drainage systems and a "pond" to catch run-off to eliminate chances of non-point source pollution from run-off leachate. ViroSewage™ technology significantly reduces leachate run off.

It is becoming increasingly obvious that composted biosolids have enormous reuse potential. In the US, products from composted biosolids are used on some of the most high-profile lawns and gardens in the country, including, the White House, Mount Vernon, the Governor's Mansion in Annapolis, Maryland and the celebrated Oriole Park at Camden Yards in Baltimore. When Tiger Woods and the rest of the 1997 U.S. Open Team drove the highways at Congressional Country Club in Potomac, MD, they were walking on grass fed with a composted by-product. In Australia, composted by-products are also used on public sites such as parks, golf courses, lawns and home gardens.

In conclusion, ViroSewage™ technology is a breakthrough technology that optimizes and optimizes all the material flows and processes associated with sewage treatment including food disposal.

For further information please contact Virotec International, +617 6330 8014 or mail@virotec.com